

A Summary of Roy Rubinstein's  
Issues w.r.t. "Fermilab as an  
International Laboratory"

Joel Butler from the writeup by Roy  
Rubinstein

- We start by assuming that at some future date there is an agreement to build an international linear collider, and that it will be sited at, or close to, Fermilab, which will be the "host laboratory". The issue to be examined here is what changes will be necessary at the Laboratory.

- One reason why it is not possible to write down solutions now to all of the problems that will need to be solved before Fermilab becomes an international laboratory is that many of the issues will be the subject of the negotiations between the governments which agree to collaborate and fund the construction and operation of a linear collider. There will be many inputs to these negotiations, which are likely to be lengthy and complex; while scientists may influence the resulting decisions, they are less likely to have the final word.

- Many groups around the world are studying how an international linear collider laboratory will be organized. Among them are
  - ECFA,
  - ACFA
  - and the US Linear Collider Steering Committee
- Available for some time is a June 2002 report from the OECD Global Science Forum, "Report of the Consultative Group on High-Energy Physics", at <http://webnet1.oecd.org/datoecd/2/32/1944269.pdf>

# OECD

The Consultative Group is composed of government science officials at the level approximately of the DOE's

Associate Director for High Energy and Nuclear Physics, together with some scientists invited by their governments (e.g. Fred Gilman as Chair of HEPAP), and representatives of some scientists' and other organizations (CERN, ICFA, ECFA, etc.). The report referred to above makes the case for a linear collider to the OECD governments, and contains a section "Organizational and Managerial Issues Associated with Creating a Major New International High-Energy Physics Facility".

An ECFA report on linear collider organization and managerial issues is available at ECFA-SGOM/4.7.1 (July 7<sup>th</sup>, 2003); an ACFA report is at

[http://lcdev.kek.jp/GLCC/glcc\\_report.pdf](http://lcdev.kek.jp/GLCC/glcc_report.pdf).

This present discussion will use the Consultative Group report as a starting point for considering what will be needed for Fermilab to become an international laboratory.

There is no experience of having an international science laboratory in the US. A few years ago, discussions were started on this issue when US participation in the ITER project was first under discussion, and a site in this country might be a possibility. However, significant progress was not made towards this goal before the US withdrew from the project.

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# OECD Consultative Group report

- Legal Basis of the Project; Management
- Special Role of Host Laboratory/Host Country;
- Key Personnel;
- General Personnel Provisions;
- Financial Provisions;
- Procurement Practices;
- Accelerator/Detector(s) Interface;
- Further Topics;Initiating International Negotiations;
- Conclusions.

# Some Areas Where Changes Will be Necessary

- A new international council will have to be formed to oversee the laboratory (essentially replacing the URA Board of Overseers?) composed of representatives of the collaborating governments, with number of members per country
- This council, to which the Fermilab Director will report, may need a legal identity in the US in order for it to hold funds, enter into contracts, etc.

- At present DOE can deny anyone access to the Fermilab site. It is very likely that the countries collaborating on a linear collider may want to consider whether this "veto" should be retained.
- Over the past few years, the ease with which non-US scientists can enter the US in order to carry out research at Fermilab has been reduced significantly.
- There are also difficulties for accompanying family members who wish to be employed in the US.

- Fermilab as an international laboratory will presumably still have to adhere to many Illinois and US laws on such items as environmental concerns.
- There are many US regulations to which Fermilab is subject that would cause difficulties if the Laboratory were to become an international organization. They would presumably be subjects of the negotiations between the governments forming the international collaboration which will build and operate the facility.

- 1. The Davis-Bacon Act. Wages are defined for workers engaged in activities that fall under a definition of construction.
- 2. The Buy-America Act. US goods must be bought by Fermilab unless a competing non-US supplier quotes a price some defined amount below the US price.

- intellectual property rights, wages and benefits to non-US personnel sent by collaborating countries to work on the accelerator or detectors, and US import/export restrictions on equipment for the facility.

Many changes will be needed before Fermilab can be considered an international laboratory in order for it to host an international linear collider. They will be part of the international government negotiations leading to the agreement to site an international linear collider here. In order for an international science facility to operate efficiently in the US, many exceptions to existing US government regulations will be necessary.